

PART V

Crops

Major Crops

Wheat and barley grown on the drylands are by far the most important crops, measured in terms of either value or acreage. Green peas are third in importance. In 1954 wheat was the leading crop produced in Columbia County. Over half of all cropland was devoted to wheat production. Barley ranked second in acreage with one-sixth of the harvested cropland. Green peas grown were third with about one-eighth of the total cropland. Alfalfa hay was the fourth major crop, asparagus was fifth and small grains for hay ranked sixth. Dry field and seed peas ranked seventh and oats were the eighth ranking crop. The remaining cropland was devoted to a variety of crops.

Crop Trends

Major crop trends in Columbia County have been the increases in the wheat and green peas. An important result of these trends has been the expansion of harvested cropland by almost 40 percent between 1939 and 1954.

Total Acres of Land Harvested, 1954: 114,856 Acres

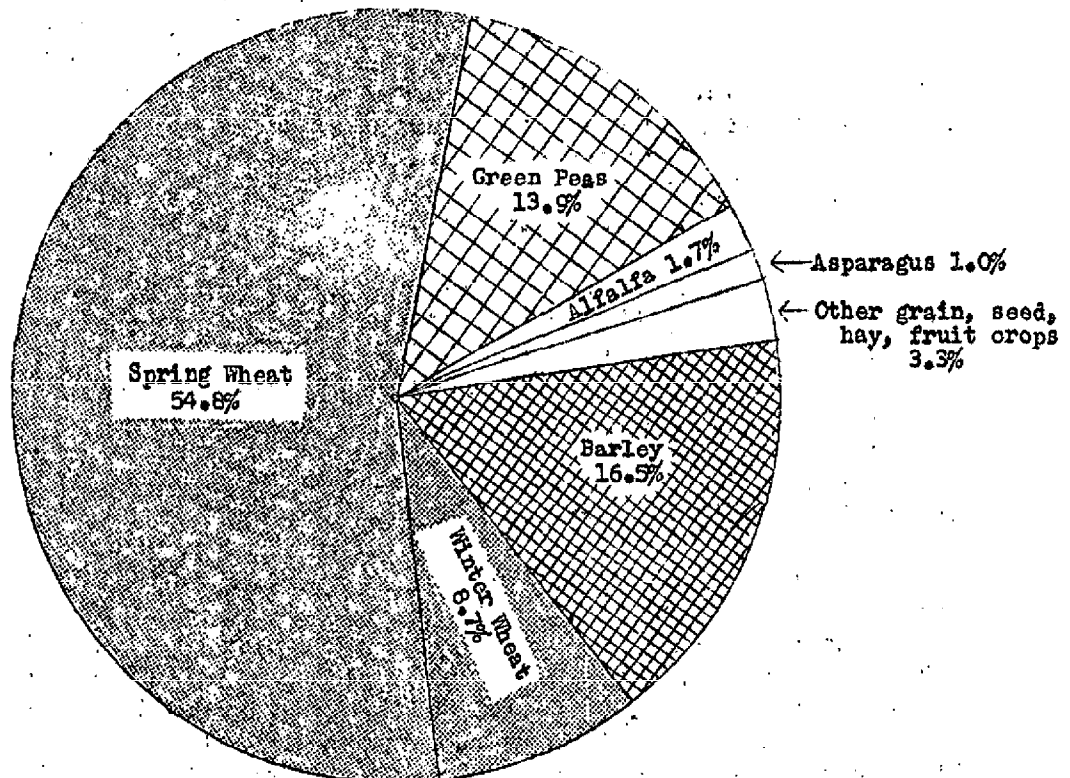


Figure 10.- Percent of Total Cropland in Leading Crops
Columbia County, 1954
(Based on U. S. Census of Agriculture, 1954)

Most of this increase came in wheat. Except for bad years in 1942 and 1950 the acreage of wheat increased steadily between 1939 and 1953, rising from 64,000 to 102,000 acres during this period. The Federal Wheat Acreage Allotment Program which began in 1954 reduced wheat from 102,000 acres in 1953 to 74,400 in 1954.

Wheat acreage diverted under this program was largely planted to barley. Barley acreage increased from 2,500 in 1953 to 21,500 acres by 1955. During the early 1940's barley also underwent a rapid growth. The acreage devoted to barley increased from 4,800 acres during 1939 to 16,700 acres in 1943 but between 1944 and 1953 less than 2,000 acres were grown per year.

Commercial vegetable growing has expanded over two-fold since 1939. During the 1939-1954 period green pea acreage grew from 6,300 acres to 14,800 acres with the period of greatest growth between 1939 and 1944. Asparagus acreage increased from 190 to 1,300 acres in the 1939-1954 period.

The land devoted to hay production declined from 7,500 acres to 3,500 acres between 1939 and 1954. Alfalfa hay acreage dropped to less than one-half its former peak by 1954. Small grains cut for hay declined to less than one-third of the 1939 total by 1954. Acreage devoted to fruit orchards has been decreased greatly since 1900.

Wheat Farming

Wheat has always been the most important crop produced in Columbia County. Grown on the wind deposited soils of the rolling terrain of northern Columbia County, wheat was the first major crop and has continued to be the most valuable farm product. Large fields make for the efficient use of machinery. About 220 farms grew wheat during 1954--most of which were operated on large acreages. Wheat increased from 64,000 acres in 1939 to 102,000 acres in 1953. However, in 1954, the first year of operation of the Federal Wheat Acreage Allotment Program, about 74,400 acres were grown.

Wheat production in 1954 totaled 2,973,000 bushels. The peak was reached in 1952 with 3,533,000 bushels estimated. Most of the wheat is produced on the summer fallow system because of the winter rainfall of 14 to 20 inches. Moisture is conserved in the fine textured topsoil by summer fallowing to prevent evaporation. After being fallow for one crop season the soil accumulates sufficient moisture for a crop. Variations in rainfall, average temperatures and fertilization practices have resulted in variable yields, ranging from a low of 23 bushels per acre in 1949 to a high of 40 bushels in 1954.

Both spring and winter wheat are planted, but the acreage seeded to each varies from year to year. Winter wheat is preferred as a result of the higher yields accompanying the better moisture and growing conditions prevailing for fall-seeded wheat. Snow cover is usually sufficient to protect winter sprouts against extreme cold. However, if the soil is dry in the fall planting is sometimes deferred until spring. Winter wheat that may be damaged by winter-kill, erosion or other climatic causes is generally reseeded to spring wheat.

Columbia County farmers have experimented with several wheat varieties in an effort to obtain higher yields. White Club was the most popular class in

Table 16.- Wheat and Barley: Acreage, Yield and Production
Columbia County, 1939-1957

Year	All Wheat			Barley		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	64,000	29.5	1,889,300	4,800	40.0	192,000
1940	68,000	26.0	1,768,000	7,500	34.0	255,000
1941	66,000	32.8	2,164,800	8,300	40.5	336,500
1942	58,000	36.0	2,088,000	15,500	45.5	705,200
1943	73,400	27.0	1,982,000	16,700	43.0	718,100
1944	80,300	30.6	2,457,000	7,100	40.5	287,500
1945	83,800	26.6	2,229,600	5,700	38.0	216,800
1946	83,800	32.3	2,704,600	1,800	43.5	78,300
1947	88,000	29.0	2,554,000	1,400	36.5	51,100
1948	90,000	30.5	2,746,000	1,800	38.0	68,400
1949	98,000	22.9	2,248,100	1,700	34.0	57,800
1950	83,000	32.7	2,714,000	11,600	39.0	452,500
1951	94,000	35.0	3,292,000	3,700	38.0	140,600
1952	102,000	34.6	3,533,000	1,900	36.0	68,400
1953	101,800	31.8	3,242,000	2,500	40.0	100,100
1954	74,400	40.0	2,972,800	18,700	44.5	832,000
1955	66,600	31.5	2,097,900	21,500	29.0	623,000
1956	68,000	31.6	2,148,600	26,400	41.0	1,083,300
1957	68,800	42.5	2,921,950	39,200	43.5	1,705,200

Source: U.S.D.A., AMS, Agric. Estimates Division
State of Washington

Table 17.- Spring Wheat and Winter Wheat
Columbia County, 1939-1957

Year	Spring Wheat			Winter Wheat		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	54,500	30.4	1,657,000	9,500	24.5	232,300
1940	44,000	29.8	1,312,000	24,000	19.0	456,000
1941	2,000	30.0	60,000	64,000	32.9	2,104,800
1942	8,000	34.1	272,500	50,000	36.3	1,815,500
1943	64,700	27.0	1,747,000	8,700	27.0	235,000
1944	42,300	29.8	1,260,100	38,000	31.5	1,196,900
1945	17,500	23.6	413,000	66,300	27.4	1,816,600
1946	5,400	29.6	159,600	78,400	32.5	2,548,000
1947	20,000	24.0	480,000	68,000	30.5	2,074,000
1948	21,000	22.0	462,000	69,000	33.1	2,284,000
1949	38,600	19.0	733,400	59,400	25.5	1,514,700
1950	24,000	29.5	708,000	59,000	34.0	2,006,000
1951	28,000	28.0	784,000	66,000	38.0	2,508,000
1952	82,000	36.5	2,993,000	20,000	27.0	540,000
1953	75,200	32.5	2,444,000	26,600	30.0	798,000
1954	67,700	40.0	2,708,000	10,100	32.0	323,200
1955	62,900	32.0	2,012,800	3,700	23.0	85,100
1956	5,800	38.0	220,400	62,200	31.0	1,928,200
1957	2,300	36.5	83,950	64,500	44.0	2,838,000

Source: U.S.D.A., AMS, Agric. Estimates Division
State of Washington

1957 accounting for slightly over one-half of the total crop. Elmar was the only variety grown and about 1,100,000 bushels of Elmar wheat were produced. Common White wheat accounted for 46 percent of the crop with Brevor the leading variety with one-fourth of the total production. Requa and Marfed were other important varieties. Triplet, a Soft Red Winter wheat, accounted for 2 percent of the crop or 44,000 bushels in 1955.

Table 18.- Varieties of Wheat Grown
in Columbia County, 1957

Classes and Varieties	Production (bushels)	Percent of Total Crop
<u>White Club Wheats</u>		
Elmar-----	730,300	25.6
Omar-----	696,000	24.3
Elgin-----	2,800	.1
<u>Common-White Wheats</u>		
Brevor-----	695,900	24.4
Fiftyfold-----	250,500	8.6
Requa-----	208,800	7.3
Golden-----	104,700	3.7
Marfed-----	42,450	1.5
Idaad-----	36,500	1.3
Burt-----	8,600	.3
Federation-----	5,000	.2
<u>Soft-Red Winter Wheats</u>		
Triplet-----	75,900	2.7
Total all classes and varieties	2,857,450	

Source: U.S.D.A., AMS, Agric. Estimates Division
State of Washington

Barley, Oats and Rye

Barley has been the second major crop in acreage terms since 1954 showing a sizable increase after the wheat allotment program started. Sometimes winter wheat seedlings damaged by freezing are reseeded to barley rather than spring wheat. Barley, like wheat, is mainly grown on the summer fallow system. Barley yields have generally been high. The highest yield in recent years was over 44 bushels per acre in 1954 but in the following year the lowest yield of 29 bushels per acre was recorded. About 180 farms produced barley during 1954 as compared with 40 in 1949. Barley is a popular feed grain and often is used on the farms where produced.

Oats are grown as a basic feed grain. One-third to one-half of the crop is usually fed on the farms where it is grown. The largest acreages were produced in the early 1940's with about 1,400 acres grown in 1942. Oat acreage declined after 1942 with less than 1,000 acres produced each year since 1945. The peak acreage in recent years was about 800 acres on 48 farms during 1954.

Rye and other feed grain crops are of minor importance. Before 1944 about 100 to 300 acres of rye were grown per year but from 1944 to 1951 no rye was

reported in the county. In recent years a few acres have been grown each year. Some mixed grains are also harvested each year.

Table 19.- Oats and Rye: Acreage, Yield and Production
Columbia County, 1939-1956

Year	Oats (grain)			Rye (For grain)		
	Acreage (acres)	Yield (bushels per acre)	Production (bushels)	Acreage (acres)	Yield (bushels per acre)	Production (bushels)
1939	960	36.5	35,000	210	30.0	6,300
1940	1,050	34.0	35,700	260	25.0	6,500
1941	850	30.0	25,500	260	16.2	4,200
1942	1,400	44.0	61,550	170	20.0	3,400
1943	1,260	41.0	51,630	110	11.8	1,300
1944	1,070	40.0	42,800	--	--	--
1945	850	45.0	38,250	--	--	--
1946	560	45.0	25,200	--	--	--
1947	470	44.0	20,690	--	--	--
1948	410	43.0	17,630	--	--	--
1949	390	44.0	17,160	--	--	--
1950	470	59.0	27,710	--	--	--
1951	400	51.0	20,400	--	--	--
1952	300	53.0	15,900	10	10.0	100
1953	270	53.0	14,300	10	10.0	100
1954	840	53.0	44,520	10	11.0	110
1955	670	34.0	22,780	30	6.7	200
1956	240	39.5	9,480	20	20.0	400

Source: U.S.D.A., AMS, Agric. Estimates Divn.
State of Washington

Hay Crops

Hay production in Columbia County has declined greatly in the last fifteen years. About one-half as much hay was produced in 1955 as was grown during 1939. The 3,500 acres grown in 1954 represented only three percent of the harvest cropland. Alfalfa has become the major hay crop in recent years. Alfalfa acreage reached a peak of 4,200 acres in 1941 and then declined steadily over the next decade. Following 1951 the acreage of alfalfa hay increased steadily and about 1,900 acres were cut in 1954. The 1954 Census of Agriculture reported 134 Columbia County farms growing alfalfa for hay with production totaling almost 4,500 tons. About one-tenth of the crop was sold from the farms where it was grown.

Small grains grown for hay have declined with the diminishing importance of the horse for work power. Over 3,000 acres of small grains were cut for hay on 280 farms in 1939 compared with 1,100 acres on 90 farms in 1954. Clover and timothy mixtures grown for hay have not been widely produced in Columbia County. About 50 to 100 acres per year have been reported in recent years. One hundred to 200 acres of other hay is produced yearly. No silage operations were reported as late as 1954.

Table 20.- Clover-Timothy Hay and Alfalfa Hay
Acreage, Yield and Production
Columbia County, 1939-1955

Year	Clover and Timothy Hay			Alfalfa Hay		
	Acreage (acres)	Yield (tons per acre)	Production (tons)	Acreage (acres)	Yield (tons per acre)	Production (tons)
1939	20	1.5	30	3,900	2.0	7,800
1940	30	1.3	40	4,000	2.0	8,000
1941	40	2.2	90	4,200	1.7	7,100
1942	60	2.0	120	3,800	1.5	5,700
1943	90	2.1	190	3,400	2.7	9,200
1944	100	.9	90	3,270	1.9	6,200
1945	90	1.1	100	3,170	2.1	6,500
1946	70	1.3	90	2,500	1.9	4,800
1947	60	1.3	80	2,060	2.6	5,300
1948	50	1.4	70	1,790	2.0	3,500
1949	40	1.5	60	1,520	2.6	3,900
1950	40	2.0	80	1,500	2.8	4,200
1951	50	2.2	110	1,700	2.6	4,500
1952	60	1.5	90	1,750	2.2	3,900
1953	70	1.9	130	1,820	2.6	4,700
1954	80	1.2	100	1,880	2.5	4,700
1955	90	1.2	110	2,090	2.0	4,100

Source: U.S.D.A., AMS, Agric. Estimates Division
State of Washington

Dry Field and Seed Peas

Dry field and seed peas are the most important of the minor field crops. A total of 2,300 acres was grown on 21 farms in 1949. This acreage was about evenly split between Austrian dry field and seed peas and varieties other than Austrian. In 1954 a total of 940 acres of dry field and seed peas other than Austrian were produced on 3 farms.

Commercial Vegetables - Green Peas, Asparagus

Commercial vegetables are the second most important source of income in Columbia County agriculture. About \$1,250,000, or 13 percent of the total agricultural income, was credited to sales of vegetable crops in 1954. Green peas are the major vegetable crop grown. Since 1954 peas have ranked third among the crops of the county although for many years green peas were the second most important crop in acreage terms. In 1954 about 14,800 acres of green peas were harvested on 3 farms in Columbia County. The county ranked second in Washington in green pea production in 1954 behind Walla Walla County and was third in the entire United States. The acreage of green peas has more than doubled since 1939 with most of this increase coming in the early 1940's. Growth in acreage has continued over the years but production has tended to be centered in fewer farms. Three farms produced peas in 1954, compared with 12 in 1949. Green peas are usually grown only on a contract basis for a major cannery. Most of the vegetables produced in Columbia County are processed by canneries at Dayton or Waitsburg.

Asparagus is the second most important commercial vegetable grown in the county. Columbia County ranks second among the counties of the state in asparagus production and most of the crop is canned at Dayton, Waitsburg and Walla Walla. Asparagus has increased greatly since 1939. Only 190 acres were grown in that year compared with over 1,400 during recent years. Asparagus was produced on three large farms in 1954. No other vegetables are of commercial importance in the county.

Table 21.-- Vegetable Crops: Green Peas and Asparagus
Columbia County, 1939-1957

Year	Green Peas		Asparagus	
	Acres	Estimated Production (tons)	Acres	Estimated Production (tons)
1939	6,270	7,000	192	210
1945	11,160	12,235	NA	NA
1949	12,730	13,750	1,068	1,300
1954	14,755	16,600	1,238	1,400
1955	NA	NA	1,300	1,650
1956	22,390	24,420	1,250	1,500
1957	16,408	14,600	1,425	1,550

NA - not available.

Sources: U. S. Census of Agriculture,
Washington Crop and Livestock
Reporting Service, USDA, AMS and
Wash. State Dept. of Agriculture,
cooperating.

Tree Fruits

Fruit production is an important minor enterprise in Columbia County agriculture. Orchards have declined in number since 1900. Ten farms were classed as fruit farms by the 1954 Census of Agriculture with sales valued at about \$325,000. Fruit production in the county was at its peak about 1900 when almost 95,000 bearing fruit trees were reported. This compares with the less than 11,000 bearing trees reported in 1954. Apples have been the principal fruit crop with over 10,100 bearing trees in 1954. Peaches (400 trees) are the second major fruit crop, followed by pears (98 trees), prunes and plums (96 trees), apricots (89 trees) and cherries (21 trees) in 1954. There were 29 farms with over 20 fruit trees each in 1954 and fruit trees, nuts and grapes occupied 330 acres during 1954. About 300 of these acres on 11 farms were under irrigation.

Table 22: Bearing Fruit Trees
Columbia County, 1890-1954

Year	Apples	Apricots	Cherries	Peaches	Pears	Prunes & Plums
1890	28,279	389	1,771	7,125	2,540	6,553
1900	66,957	526	3,663	5,658	6,849	9,763
1910	40,621	347	2,766	5,869	2,886	2,857
1920	57,514	60	1,287	2,538	840	1,076
1930	37,358	73	528	451	301	752
1940	28,894	32	87	139	258	262
1950	19,401	185	204	570	161	162
1954 1/	10,114	89	21	406	98	96

1/ Includes trees only in orchards of 20 trees or more.

Sources: Washington Tree Fruits, Washington Crop and
Livestock Reporting Service, USDA and Wash.
State Dept. of Agric., Cooperating, 1952.
U. S. Census of Agriculture.